APPARATUS AND METHOD FOR MICROCONTROLLER DEBUGGING

ABSTRACT OF THE DISCLOSURE

5   Apparatus and method for microcontroller debugging. A preferred embodiment microcontroller integrated circuit comprises debug circuitry on the integrated circuit. The debug circuitry is capable of breaking normal instruction execution based on an address breakpoint, a stack pointer breakpoint, or a single step breakpoint. Upon detection of a valid breakpoint, the debug circuitry substitutes a jump to a debug

10   program instruction in place of the next normal application program instruction. The debug program then may provide microcontroller status to a developer, allowing the developer to debug the application program. Upon completion of the debug program, control of the microcontroller is returned to the application program at the point of interruption.